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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,838	11/01/2001	Stephen H. Harris	01-2584A	6292

24114 7590 10/01/2004
LYONDELL CHEMICAL COMPANY
3801 WEST CHESTER PIKE
NEWTOWN SQUARE, PA 19073

EXAMINER

CAIN, EDWARD J

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,838

Applicant(s)

HARRIS ET AL.

Examiner

Edward J. Cain

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geissler et al.

Geissler et al disclose aqueous dispersions of copolymers and processes for their production (abstract). These copolymers comprise a (meth)acrylic acid ester monomer which may be t-butyl (meth)acrylate, optionally, a second monomer which may be a vinyl aromatic or a vinyl ester and a third unsaturated carboxylic acid monomer such as (meth)acrylic acid. The relative proportion of (meth)acrylate monomer is taught as greater than 50% while the carboxylic acid monomer is taught by example to be 1 or 2 % when copolymerized with butyl acrylate. The further incorporation of emulsifiers such as dodecylbenzene sulfonate in amounts of 0.1 to 5 % is also taught. The % solids of these dispersions is taught to be 30 to 70%.

It would have been obvious to one of ordinary skill in the art to select t-butyl acrylate as the (meth)arylate monomer and (meth)acrylic acid as a comonomer in relative proportions such as claimed instantly. It would further have been obvious to select dodecylbenzene sulfonate as the emulsifier and use it in relative proportions such as claimed instantly.

Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al in view of Kowalski et al.

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Cheng et al disclose processes for emulsion polymerization comprising two steps. In the first step a seed latex is produced by polymerizing a fraction of the total monomer mixture in the presence of a surfactant and an initiator. In the second step the remaining monomer mixture is polymerized. Among the monomers taught as suitable is butyl acrylate/(meth)acrylic acid.

It would have been obvious to one of ordinary skill in the art to select applicant's claimed monomer mixture in these processes.

The Cheng et al reference fails to disclose applicant's preferred redox initiator system. The reference to Kowalski et al, however, teaches the use of redox systems such as instantly claimed in similar multistep emulsion polymerization processes.

Therefore, it would have been obvious to one of ordinary skill in the art to substitute the redox system taught by Kowalski et al into the process of Cheng et al with the reasonable expectation that suitable results would ensue.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward J. Cain whose telephone number is (571) 272-1118. The examiner can normally be reached on M-F from 10:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Edward J. Cain
Primary Examiner
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A handwritten signature in black ink, appearing to read 'E. J. Cain', is positioned below the printed name and title.